DETAILED ACTION

1. The disclosure is objected to because of the following informalities: The reference numeral used to represent the aperture, located in the toilet bowl, is incorrect on page 5 line 13 and page 7 lines 19 and 20.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. Claims 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear if the bolt extends past the toilet bowl apertures at least 12 or 18 mm or if the length of the bolt is at least 12 or 18 mm. For the purpose of applying prior art the claim will be interpreted to read that the bolt is at least 12 or 18 mm long.

3. Claim 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim calls for a 'toilet seat fixing" it is unclear what the applicant means by "toilet seat fixing" for the purpose of applying prior art the claim will be interpreted as being "toilet seat fitting".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 12-14, 16, 23, 25, 26, 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Stahli (U.S. Patent 4,080,671). Stahli shows a toilet seat fitting that is used to connect a toilet seat (1) to the toilet bowl (5), the fitting comprising a bolt (12 and 7) for insertion into a toilet bowl having a pair of apertures (6) (column 1, line 44). The outer portion of the bolt has engagement members (9) arranged to frictionally engage the inner circumference of the aperture (6). A plurality of engagement members (9) project outwardly sideways from the rod, relative to the direction of insertion and have an outer surface which is parallel to the direction of insertion. The engagement members (9) are angled toward the head of the bolt in order to provide a larger frictional force against the movement of the bolt in the direction opposite of insertion, see Fig. 2. The post (7) has a head (12) that extends further sideways relative to the direct of insertion for engaging the toilet pan around the aperture (6), see Fig. 2. A hinge (4) is pivotally coupled to the toilet seat fitting for pivotally connecting the toilet seat (1). The toilet seat (1) comprising an annual seat member that is pivotally coupled to the pair of bolts (7 and 12), see Fig.2.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 5, 6, 15, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahli (U.S. Patent 4,080,671). Stahli shows the instant invention as discussed above in paragraph 5, Stahli is silent as to the length of the bolt. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the bolt an appropriate length because the size of the aperture in the toilet pan is directly relative to the length of the bolt, thus the length of the bolt is a design choice based on the size of the aperture. Stahl shows engagement members (9) that are relatively thin, but fails to show a flange thickness of at least 1 mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bolt shown by Stahli to include an appropriate flange thickness because the flange thickness is a directly relative to the size of the aperture, thus the diameter of the flange thickness would be a design choice. Further Stahli fails to show a bolt diameter of at least 15 mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bolt diameter shown by Stahli to a diameter of an appropriate size because the diameter of the bolt is directly relative to the size of the aperture the bolt is inserted into, thus the diameter of the bolt is a design choice.

8. Claims 2, 3, 4, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahli (U.S. Patent 4,080,671 in view of Tanamura et al (U.S. Patent 6,012,886 herein after Tanamura). Stahli shows the instant invention as discussed above in paragraphs 5 and 7, further, Stahli shows a bolt made of plastic but fails to show a specific plastic and the Shore hardness of the plastic. Tanamura teaches a bolt that is used to attach a toilet seat to the toilet bowl through an aperture. The bolt (21),

expanding member (23) and member (24) are all formed out of a polypropylene (column 6 lines 51-53). Polypropylene (a thermoplastic elastiomer) is known to have a Shore hardness of 70A. It would have been obvious to one or ordinary skill in the art at the time the invention was made to have modified the bolt shown by Stahli to provide a bolt made out of polypropylene with an appropriate Shore hardness as taught by Tanamura because polypropylene is a strong material and durable against a toilet cleaner or detergent (Tanamura column 6 lines 54-56).

9. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahli (U.S. Patent 4,080,671 in view of Wayland (U.S. Patent 3,494,244). Stahli shows the instant invention as discussed above in paragraphs 5 and 7, but fails to show at least three engagement members spaced along the post. Wayland teaches a fastener that is a push type fastener. The fastener includes five flanges spaced along the length of the fastener. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bolt shown by Stahli to include at least three engagement members as taught by Wayland because the more engagement members the larger the surface area of contact with the aperture, .therefore increasing the fastening strength. Further Stahli and Wayland both fail to specify the distance in which the engagement member are spaced along the length of the bolt and the engagement members having a pitch of at least 10 mm. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bolt as shown by Stahli in view of Wayland to include an appropriate distance in which the engagement members are spaced along the length of the bolt having an appropriate

pitch because the if the engagement members are spaced too close together it does not provide adequate surface area for the engagement members properly grip the interior surface of the aperture. The particular spacing of the engagement members is based upon the substance in which the engagement members will come in contact with and is obviously a design choice.

10. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stahli (U.S. Patent 4,080,671 in view of Regensburger (U.S. Patent 5,232,322). Stahli shows the instant invention as discussed above in paragraphs 5 and 7, Stahli further shows engagement members that extend continuously around the post, see Fig 2, but fails to show a rod that is made out of a different material than the engagement members. Regensburger teaches a fastener in which the shaft (1) is made out of a different material than the anchoring members (4). The shaft is constructed out of stainless steel and the anchor members are to be made from a soft material such as spring steel, ceramics, or plastic (column 3 lines 21-38). It would have been obvious to one of ordinary skill in the art to have modified the bolt shown by Stahli to include a different material for the engagement members as taught by Regensburger because the engagement members being made of a different material would allow the proper material to be chosen for different mating surfaces (Regensburger column 3 lines 24-27).

11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stahli (U.S. Patent 4,080,671 in view of Notzold (U.S. Patent 5,361,423). Stahli shows the instant invention as discussed above in paragraphs 5 and 7, but fails to show a suction

cup located on the bolt head assembly (7 and 12) for engaging the top surface of the toilet bowl. Notzold teaches a toilet seat and toilet bowl connector. The connector includes a base plate in which two disks (17) are inserted into the mounting holes (20) in the toilet bowl (column 5, lines 29-35). The base plate (10) also includes two suction cups (15) to adhere the toilet seat to the toilet pan. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the bolt head assembly as shown by Stahli to include a suction cup as taught by Notzold because it would help secure the bolt head assembly to the toilet bowl for a more secure fastener.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hogue (U.S. Patent 6,347,415), shows the Shore Hardness of polypropylene and that polypropylene is an elastomeric material in column1 liens 46-column 2 line 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAUREN HEITZER whose telephone number is (571)270-5198. The examiner can normally be reached on 8:30 am - 5:00 pm Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/LAUREN HEITZER/
Examiner, Art Unit 3751

/Gregory L. Huson/

Supervisory Patent Examiner, Art Unit 3751